Carlsbad Municipal Water District

Water Quality Report for 2001

The Carlsbad Municipal Water District is pleased to provide you with this Consumer Confidence Report on water quality. This report gives you information about the quality of the water we delivered to you in the year 2001. This water was purchased from the Metropolitan Water District of Southern California, which conducted the testing and provided a majority of the data for this report.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

Contaminants that may be present in source water include:

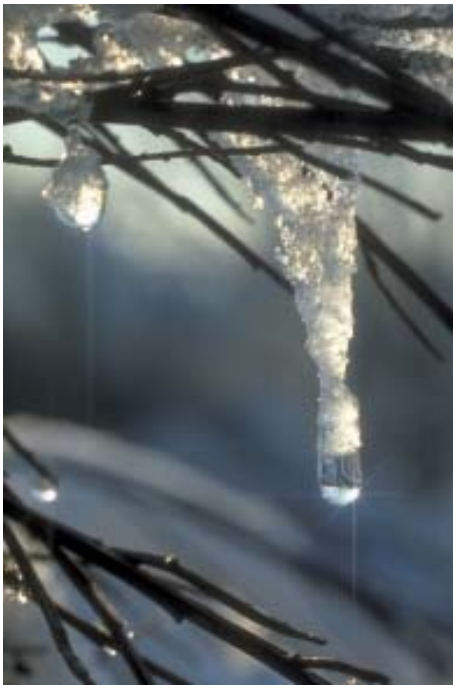
- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the California Department of Health Services (CDHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

In addition, we take many steps to ensure your water's quality and safety before it reaches your tap. These include routine water sampling and monitoring, analyzing the results of the sampling and adjusting treatment, flushing pipes through hydrants, and repairing pipes.

Most of the substances listed in this report occur naturally in our environment and in the foods we eat. Their standards have safety margins that take into account contaminant exposures from other sources, such as food and air. For this reason, these standards should *not* be regarded as fine lines between safe and dangerous concentrations.

This report covers testing for contaminants in 2001. If you have any questions, please contact Jim Ball of the Carlsbad Municipal Water District at (760) 438-2722.



Special Note:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

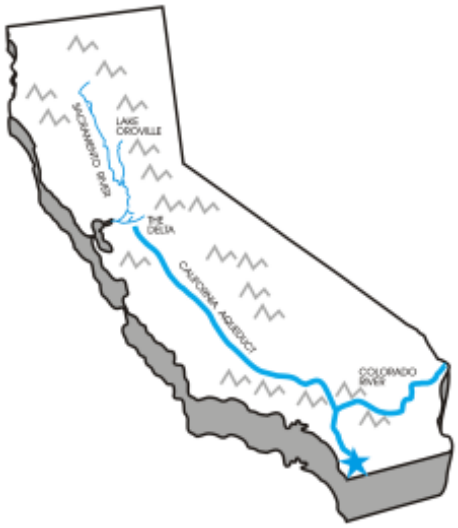
Where Your Water Comes From

CMWD imports 100% of its water supply, since we have no local sources of water. This supply is treated by and purchased from the Metropolitan Water District of Southern California (MWD) via our wholesaler, the San Diego County Water Authority (SDCWA).

MWD receives water from two sources: the Colorado River through the Colorado River Aqueduct, and Northern California through the California Aqueduct (also known as the State Water Project). These waters are blended and rigorously treated at MWD's Lake Skinner Treatment Plant in southern Riverside County. The water is then delivered to Carlsbad through the San Diego Aqueduct, owned by SDCWA.

In 2001, an average of 74% of our water came from the Colorado River, with the remaining 26% coming from Northern California.

The water quality data contained in this report is obtained from MWD based on their sampling of waters combined at the Lake Skinner Plants.



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Carlsbad Municipal Water District
Water Quality Data for 2001

The table on the next two pages lists all of the regulated drinking water contaminants that were detected during the calendar year 2001. The presence of contaminants in water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in 2001. The U.S. Environmental Protection Agency and the California Department of Health Services require that monitoring for certain contaminants be less than once per year because the concentrations of these contaminants do not change frequently.

PARAMETER	UNIT OF MEASURE	STATE MCL	PHG (MCLG)	RANGE AVERAGE	COMBINED SKINNER PLANT EFFLUENTS	MAJOR SOURCES IN DRINKING WATER
PRIMARY STANDARDS -- Mandatory Health-Related Standards						
CLARITY						
Combined Filter Effluent Turbidity	NTU %	0.5 95 (a)	NA	Highest %<0.5	0.16 100%	Soil runoff
MICROBIOLOGICAL (b)						
Total Coliform Bacteria	%	5.0 (b)	(0)	Range Average	0 - 0.46% 0.06%	Naturally present in the environment
Fecal Coliform and *E. coli*	(c)	(c)	(0)	% of fecal coliform & *E. coli* samples that were positive = 0		Human and animal fecal waste
ORGANIC CHEMICALS ***Pesticides/PCBs***						
Acrylamide	--	TT	(0)	Range Average	TT TT	Added to water during sewage/wastewater treatment
Epichlorohydrin	--	TT	(0)	Range Average	TT TT	Industrial factory discharges; treatment chemical impurities
Volatile Organic Compounds						
Methyl-*tert*-butyl-ether (MTBE) (d)	ppb	13	13	Range Average	ND - 1.3 0.9	Leaking underground gasoline storage tanks and pipelines
Toluene	ppb	150	150	Range Average	ND - 0.6 ND	Discharge from petroleum and chemical refineries
Total Trihalomethanes (f)	ppb	100	NA	Range Average	36 - 59 50	By-product of drinking water chlorination
INORGANIC CHEMICALS						
Fluoride	ppm	2	1	Range Average	0.19 - 0.24 0.22	Erosion of natural deposits; water additive for tooth health
RADIONUCLIDES (h)						
Gross Alpha Particle Activity	pCi/L	15	NA	Range Average	ND - 5.53 3.99	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	50	NA	Range Average	ND - 7.48 5.24	Decay of natural and manmade deposits
Combined Radium (i)	pCi/L	5	NA	Range Average	ND - 2.36 1.01	Erosion of natural deposits
Uranium	pCi/L	20	0.5	Range Average	ND - 3.18 2.61	Erosion of natural deposits
SECONDARY STANDARDS -- Aesthetic Standards						
Chloride	ppm	500	NA	Range Average	76 - 85 79	Runoff and leaching from natural deposits; seawater influence
Color	Units	15	NA	Range Average	1 - 3 2	Naturally occurring organic materials
Corrosivity	SI	non-corrosive	NA	Range Average	0.19 - 0.42 0.34	Elemental balance in water; affected by temperature and other factors
Methyl-*tert*-butyl-ether (MTBE) (d)	ppb	13	13	Range Average	ND - 1.3 0.9	Leaking underground gasoline storage tanks and pipelines
Odor Threshold (j)	Units	3	NA	Range Average	(j) (j)	Naturally occurring organic materials
Specific Conductance	µmho/cm	1600	NA	Range Average	813 - 876 836	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	Range Average	166 - 186 177	Runoff and leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	Range Average	480 - 521 500	Runoff and leaching from natural deposits; seawater influence
Turbidity (monthly)	NTU	5	NA	Range Average	0.05 - 0.07 0.06	Soil runoff

PARAMETER	UNIT OF MEASURE	STATE MCL	PHG (MCLG)	RANGE AVERAGE	COMBINED SKINNER PLANT EFFLUENTS	MAJOR SOURCES IN DRINKING WATER
ADDITIONAL SAMPLING -- CMWD Distribution System						
Coliform Bacteria	%	5.0 (b)	(0)	Range Average	0 - 0.60% 0.12%	Naturally present in the environment
Total Trihalomethanes	ppb	100	NA	Range Average	44 - 78 63	By-product of drinking water chlorination
UNREGULATED CHEMICALS REQUIRING MONITORING						
Boron	ppb	NA	AL= 1,000	Range Average	120 - 130 120	Erosion of natural deposits
Perchlorate	ppb	NA	AL=18	Range Average	ND - 6 4	Rocket fuel and chemical fertilizers
ADDITIONAL PARAMETERS						
ICR-Disinfection By-Products *(Data is from 8/97 to 12/98 except for chlorine residual which is for 2001)*						
Chloral hydrate	ppb	NA	NA	Range Average	3.5 - 7.0 5.1	Disinfection by-product
Cyanogen chloride	ppb	NA	NA	Range Average	2.3 - 5.5 3.4	Disinfection by-product
Haloacetic acids	ppb	NA	NA	Range Average	17 - 33 25	Disinfection by-product
Haloacetonitriles	ppb	NA	NA	Range Average	5.6 - 17 8.7	Disinfection by-product
Haloketones	ppb	NA	NA	Range Average	1.3 - 2.2 1.6	Disinfection by-product
Total organic halides	ppb	NA	NA	Range Average	115 - 157 138	Disinfection by-product
Total chlorine residual	ppm	NA	NA	Range Average	2.27 - 2.83 2.57	Disinfection by-product
Microbial Contaminants						
Heterotrophic Plate Count (m)	CFU/mL	NA	NA	Range Average	<1 <1	Heterotrophic bacteria naturally present in the environment
Other Parameters						
Alkalinity	ppm	NA	NA	Range Average	112 - 123 116	Erosion of natural deposits; leaching
Calcium	ppm	NA	NA	Range Average	55 - 59 57	Erosion of natural deposits; leaching
Hardness	ppm	NA	NA	Range Average	232 - 248 239	Erosion of natural deposits; leaching
Magnesium	ppm	NA	NA	Range Average	23 - 24.5 23.5	Erosion of natural deposits; leaching
pH	pH Units	NA	NA	Range Average	8.03 - 8.10 8.06	
Potassium	ppm	NA	NA	Range Average	3.8 - 4.1 3.9	Erosion of natural deposits; leaching
Sodium	ppm	NA	NA	Range Average	71 - 82 77	Naturally occurring
Total Organic Carbon (n)	ppm	NA	NA	Range Average	2.33 - 2.96 2.69	Naturally occurring organic material

Abbreviations

AL Regulatory Action Level
CFU/mL Colony Forming Units per milliliter
ICR Information Collection Rule
MCL Maximum Contaminant Level
MCLG Maximum Contaminant Level Goal
MFL million fibers per liter
NA Not Applicable
NC Not Collected
ND None Detected
NTU Nephelometric Turbidity Units
pCi/L picoCuries per liter
PHG Public Health Goal
ppb parts per billion, or micrograms per liter (µg/L)
ppm parts per million, or milligrams per liter (mg/L)
ppt parts per trillion, or nanograms per liter (ng/L)
SI Saturation Index (Langelier)
TT Treatment Technique
µmho/cm micromhos per centimeter

How to Read This Report

As you read the tables on pages 3 and 4, compare the level of constituents found in CMWD's water in the "Combined Skinner Plant Effluents" column with the standards set for them in the MCL and PHG columns. You'll see that CMWD's water did not violate any drinking water standards in 2001.

The following are key terms to help you understand the standards we use to measure drinking water safety.

Public Health Goals (PHGs) reflect the level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goals (MCLGs) reflect the same levels as PHGs, but are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Levels (MCLs) reflect the highest level of a contaminant that is allowed in drinking water. MCLs are divided into two categories: primary and secondary.

Primary Drinking Water Standards (PDWS) are MCLs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements. These are set by the federal EPA and the California Department of Health Services. PDWS are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.

Secondary Drinking Water Standards (SDWS) protect the odor, taste and appearance of drinking water and are set by the California Department of Health Services.

Treatment Technique (TT) is a required process intended to reduce the level of a contaminant in drinking water.

Notes

(a) The turbidity level of the filtered water shall be less than or equal to 0.5 NTU in 95% of the measurements taken each month and shall not exceed 5.0 NTU at any time. Turbidity is a measure of the cloudiness of the water. The Metropolitan Water District monitors it because it is a good indicator of the effectiveness of their filtration system. The monthly average and range of turbidity are listed in the Secondary Standards section.

(b) Total coliform MCLs: No more than 5.0% of monthly samples may be total coliform positive. Compliance is based on the combined distribution system sampling from all of the filtration plants in the Metropolitan Water District system. In 2001, 10,781 samples were analyzed. The MCL was not violated.

(c) Fecal coliform/*E. coli* MCLs: The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/*E. coli*, constitutes an acute MCL violation. The MCL was not violated in 2001.

(d) Aluminum, thiobencarb and MTBE have both primary and secondary standards.

(e) Not used.

(f) Calculated from the monthly filtration plant effluent samples. The highest running annual average of more than 40 quarterly distribution system samples was 60 ppb for 2001.

(g) Not used.

(h) Results are for the 1998/99 4-quarter radiological monitoring program.

(i) Standard is for Radium-226 and -228 combined.

(j) Metropolitan has developed a flavor-profile analysis method that can more accurately detect odor occurrences. For more information, contact MWD at (213) 217-6850.

(k) Not used.

(l) Not used.

(m) Pour plate technique, 48-hour incubation at 35°C, monthly averages.

(n) TOCs at the filtration plants were taken at the filter effluents.

If you have questions or concerns regarding the quality of Carlsbad's water, contact Jim Ball of CMWD's Water Operations Division at 760-438-2722 or by email at jball@ci.carlsbad.ca.us. For more detailed information on testing procedures, results and source water assessments, contact the Metropolitan Water District of Southern California's Water Quality Division at 1-800-CALL MWD.

To participate in decisions that affect drinking water in the CMWD service area, please watch the Carlsbad City Council agenda for drinking water items. Agendas can be obtained at Carlsbad City Hall, 1200 Carlsbad Village Drive, or on the Internet at www.ci.carlsbad.ca.us. The City Council meets every Tuesday at 6:00 p.m. at City Hall. Comments regarding your drinking water are always welcome.

This report is mailed to all water customers at their billing address and is available at most City facilities. This report may be photocopied and distributed or posted in a prominent place at your facility. Additional copies are available on the Internet at http://www.ci.carlsbad.ca.us/cserv/water.html or by calling the Carlsbad Municipal Water District at 760-438-2722.

The Carlsbad Municipal Water District is located at 5950 El Camino Real. Our office hours are Monday through Friday 8:00 a.m. to 5:00 p.m.